



<p> <math>N(R^8)-C(R^7)=N-O-CH_2-</math>;  <math>m, n = 0-2</math>;  <math>Q = O</math> or <math>S</math>;  <math>R^7 =</math> alkyl, alkoxy, alkylthio, alkylamino, dialkylamino or cycloalkyl  (all opt. substd.), <math>H</math> or <math>CN</math>;  <math>R^8 =</math> alkyl, alkoxy or cycloalkyl (all opt., substd.), <math>H</math>, <math>OH</math> or <math>CN</math>;  <math>Z =</math> alkyl, alkenyl, alkynyl, cycloalkyl, aryl or heterocyclyl (all opt. substd.). </p>	<p> <math>S(O)_{n-}, -CQ-, -S(O)_{n-}CH_2-, -C(R^7)=N-O-, -C(R^7)=N-O-CH_2-, -N(R^8)-, -CQ-N(R^8)-, -N(R^8)-CQ-, -Q-CQ-N(R^8)-, -N=C(R^7)-Q-CH_2-, -CH_2-O-N=C(R^7)-, -N(R^8)-CQ-Q-, -CQ-N(R^8)-CQ-Q-, -N(R^8)-CQ-Q-CH_2-, -Q-C(R^7)=N-O-CH_2-</math> or <math>-N(R^8)-C(R^7)=N-O-CH_2-</math>;  <math>R^7 =</math> <math>Cy, T'', OT'', ST'', NHT'', NT''_2, H</math>, halo or <math>CN</math>;  <math>R^8 =</math> <math>Cy, T'', H, OH</math> or <math>CN</math>;  <math>Z =</math> 1-8C alkyl (opt. substd. by 1 or more halo, <math>CN, OH, NH_2, OT'', ST', SOT'</math> or <math>SO_2T'</math> (opt. substd. by halo)), 2-8C alkenyl (opt. substd. by halo), 2-8C alkynyl (opt. substd. by halo), 3-6C cycloalkyl (opt. substd. by one or more halo, <math>CN, COOH, Ph, T'', COOT''</math>), or <math>Ar</math>;  <math>Ph =</math> phenyl (opt. substd. by halo, <math>CN, T', 1-4C</math> haloalkyl, 1-4C haloalkoxy or <math>OT''</math>);  <math>Ar =</math> phenyl, naphthyl or 3-7-membered heterocycl contg. <math>O, S</math> or <math>N</math> and opt. 1 or 2 additional <math>N</math> (all opt. substd. by one or more <math>R^9</math>);  <math>R^0 =</math> halo, <math>CN, NO_2, NH_2, OH, CHO, COOH, CONH_2, CSNH_2, XR_n, 2-6C</math> alkenyl, 2-6C alkenyloxy (both opt. substd. by 1-13 halo), <math>NHT, NT_2, COT, OCOT, COOT, OSO_2T, T</math> (substd. by <math>NH_2, NHOT, Cy, Alk, OAlk, Het, CH_2Het</math> or <math>Ar^3</math>);  <math>Alk =</math> 1-6C alkylene (opt. substd. by one or more halo, or <math>T'</math> (opt. </p>
<p> <b>MORE SPECIFICALLY</b>  <math>R^1, R^4 = T'', OT'', ST'', NHT'', NT''_2, H</math>, halo or <math>CN</math>;  <math>R^2, R^6 = T'', OT'', ST'', NHT'', NT''_2, H</math>, halo or <math>CN</math>;  <math>R^3 =</math> 2-6C alkenyl, 2-6C alkynyl (both opt. substd. as for <math>T''</math>), <math>T'', Cy</math>-substd. 1-4C alkyl, <math>H</math> or <math>CN</math>;  <math>T'' = T</math> (opt. substd. by halo, <math>CN</math> or <math>OT''</math>)  <math>T, R^5 =</math> 1-6C alkyl;  <math>T' =</math> 1-4C alkyl;  <math>Cy =</math> 3-6C cycloalkyl (opt. substd. by halo, <math>CN, COOH, T'</math> or <math>COOT'</math>);  <math>G =</math> 1-4C alkanediyl, 2-4C alkenediyl or 2-4C alkynediyl (all opt. substd. by halo, <math>OH, T', 1-4C</math> haloalkyl or 3-6C cycloalkyl),  bond, <math>O, S, -Q-CQ-, -CQ-Q-, -CH_2-Q-, -Q-CH_2-, -CQ-Q-CH_2-, -CH_2-CH_2-Q-CQ-, -Q-CQ-CH_2-, -Q-CQ-Q-CH_2-, -N=N-, -S(O)_{n-}, -CH_2-</math> </p>	<p> <math>S(O)_{n-}, -CQ-, -S(O)_{n-}CH_2-, -C(R^7)=N-O-, -C(R^7)=N-O-CH_2-, -N(R^8)-, -CQ-N(R^8)-, -N(R^8)-CQ-, -Q-CQ-N(R^8)-, -N=C(R^7)-Q-CH_2-, -CH_2-O-N=C(R^7)-, -N(R^8)-CQ-Q-, -CQ-N(R^8)-CQ-Q-, -N(R^8)-CQ-Q-CH_2-, -Q-C(R^7)=N-O-CH_2-</math> or <math>-N(R^8)-C(R^7)=N-O-CH_2-</math>;  <math>R^7 =</math> <math>Cy, T'', OT'', ST'', NHT'', NT''_2, H</math>, halo or <math>CN</math>;  <math>R^8 =</math> <math>Cy, T'', H, OH</math> or <math>CN</math>;  <math>Z =</math> 1-8C alkyl (opt. substd. by 1 or more halo, <math>CN, OH, NH_2, OT'', ST', SOT'</math> or <math>SO_2T'</math> (opt. substd. by halo)), 2-8C alkenyl (opt. substd. by halo), 2-8C alkynyl (opt. substd. by halo), 3-6C cycloalkyl (opt. substd. by one or more halo, <math>CN, COOH, Ph, T'', COOT''</math>), or <math>Ar</math>;  <math>Ph =</math> phenyl (opt. substd. by halo, <math>CN, T', 1-4C</math> haloalkyl, 1-4C haloalkoxy or <math>OT''</math>);  <math>Ar =</math> phenyl, naphthyl or 3-7-membered heterocycl contg. <math>O, S</math> or <math>N</math> and opt. 1 or 2 additional <math>N</math> (all opt. substd. by one or more <math>R^9</math>);  <math>R^0 =</math> halo, <math>CN, NO_2, NH_2, OH, CHO, COOH, CONH_2, CSNH_2, XR_n, 2-6C</math> alkenyl, 2-6C alkenyloxy (both opt. substd. by 1-13 halo), <math>NHT, NT_2, COT, OCOT, COOT, OSO_2T, T</math> (substd. by <math>NH_2, NHOT, Cy, Alk, OAlk, Het, CH_2Het</math> or <math>Ar^3</math>);  <math>Alk =</math> 1-6C alkylene (opt. substd. by one or more halo, or <math>T'</math> (opt. </p>

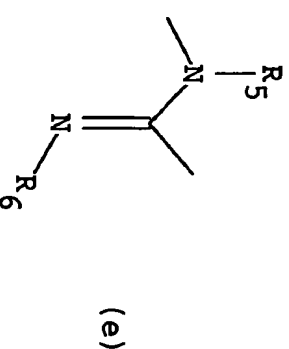
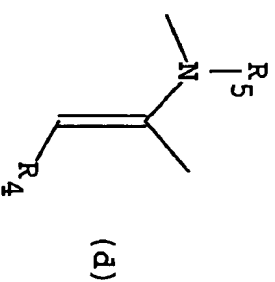
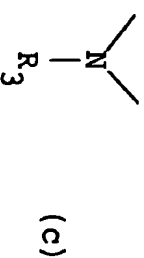
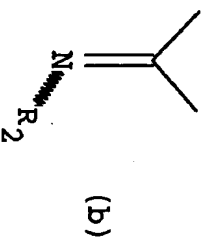
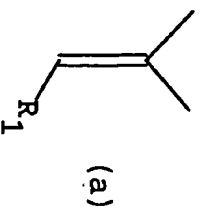
subst. by 1-9 halo));

X = bond, O, S, SO, SO<sub>2</sub>;

Het = 3-7 membered heterocycle with 1-3 heteroatoms (esp. N, O S);  
Ar<sup>3</sup> = pyridyl, thienyl, phenyl, phenoxy, phenylthio, benzyl,  
benzyloxy, benzylthio, phenylethyl or phenylethyloxy (all opt.  
ring-subst. by R");

R" = T', ST', OT' (all opt. subst. with 1-9 halo), halo, CN, Alk or  
OAlkO;

E = a gp. of formula (a)-(e).



### USE

(I) are plant fungicides which are tolerated well by plants and which are esp. useful for the control of cereal diseases caused by various spp. including *Erysiphe*, *Leptosphaeria*, *Pyrenophora* and *Cochliobolus* spp. as well as diseases in fruit and vegetable crops caused by various spp. including *Podosphaera*.

Application rate is 0.001-50g/kg when used as a seed dressing.

### ADVANTAGE

(I) are more effective than known substd. carboxamides (cf. e.g. EP 398692) and have esp. good activity in vitro.

### PREPARATION

Claimed prepn. of (I) is as follows.



(II)

(III)

R = OH, halo or alkoxy.

(III) can be used as a hydrohalide and the reaction may be performed in the presence of an acid acceptor, condensation agent and/or diluent.

### EXAMPLE

A mixt. of methyl 2-methoxyimino-2-[2-(2-methylphenoxy-methyl)-phenyl]-acetate (2.5 g) and 4-chlorobenzylamine (1.14 g) was stirred at 120 °C for 12 hrs., cooled, taken up in CH<sub>2</sub>Cl<sub>2</sub>, washed (H<sub>2</sub>O, 1N HCl, then H<sub>2</sub>O), dried (Na<sub>2</sub>SO<sub>4</sub>) and filtered. Concentration and chromatography (SiO<sub>2</sub>; petroleum ether:EtOAc, 5:1) gave N-(4-chlorobenzyl)-2-methoxyimino-2-[2-(2-methylphenoxy)methyl)-

acetamide (1.4 g; 42% yield); oil.

Typical cpds. (I) applied at 250 g/ha gave 100% protection to wheat and barley from attack by Erysiphe graminis and also gave 100% kill of this fungus on the same cereals. When used in concns. of 20 ppm, cpds. also gave 89-97% protection to apples from attack by Podosphaera leucotricha. (LJ)  
(83pp2101DwgNo.0/0)  
SR:6.Jnl.Ref EP431328 JP01031753 JP02142761 WO9501328